Sustainable Communities Planning Grant Application

Applicant (Agency & address)			Proposed Date of Completion: 6/30/2012
			Grant Amount Requested: $300,000
Shasta County RTPA **1855 Placer Street** **Redding, CA 96001**	City		If Joint Proposal, list participating entities:
	County		
	MPO	√	
	COG		
	RTPA		
	JPA		
	Joint Proposal		

Lead Applicant's Name: **Shasta County Regional Transportation Planning Agency**

Title of Proposal (summarize the deliverable to be funded by this grant):
Shasta County Beta-SCS & Regional GIS/Climate Change Accountability Platform

Applicant's Representative Authorized in Resolution:	Person w/ day to day responsibility for plan:
Name **Daniel Little**	Name: **Daniel Wayne**
Title: **Executive Director**	Title: **Senior Planner**
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Email: **dlittle@co.shasta.ca.us**	Email: **dwayne@co.shasta.ca.us**

Check all of the following that are incorporated or applicable to the proposal:

Focus Area		**Program Objectives**	
	Focus Area #1		Applying for 20% EDC set aside
√	Focus Area #2 - Regional SB 375 Plus		
	Focus Area #3	√	Improve air and water quality
Eligibility Requirements		√	Promote public health
√	Consistent with State Planning Priorities	√	Promote equity
√	Reduces GHG emissions on a permenant basis	√	Increase affordable housing
√	Collaboration requirement	√	Increase infill and compact development
Priority Considerations		√	Revitalize urban and community centers
√	Demonstrates collaboration & community involvment	√	Protect natural resources and agricultural lands
√	Addresses climate change impacts	√	Reduce automobile usage and fuel consumption
√	Serves as best practices	√	Improve infrastructure systems
√	Leverages additional resources	√	Promote water conservation
√	Serves an economically disadvantaged communities	√	Promote energy efficiency and conservation
	Serves a severely disadvantaged community	√	Strengthen the economy

I certify that the information contained in this plan application, including required attachments, is complete and accurate.

Signature: _____ _____

Applicant's Authorized Representative as shown in Resolution — Date

Print Name and Title: **Daniel S. Little, Executive Director**

I. PROPOSAL SUMMARY STATEMENT

The scope of work proposed herein caps three-plus years of progressive work toward a more sustainable Shasta County. Included are all building blocks necessary for Shasta County to transition from the Regional Blueprint process to a beta-version of the Sustainable Communities Strategy (SCS). Perhaps more importantly, the proposed approach effectively addresses the local political context wherein the SCS must be implemented.

The timing and nature of proposed work tasks capitalizes on the momentum and interest generated via the Regional Blueprint toward regional planning and sustainability. Without grant funding, much of the results from Shasta County's comprehensive public outreach and regional consensus building would languish over the next four years awaiting the 2015 RTP update.

Early adoption of a beta-SCS will allow local agencies time to test the plan under real world decision-making and, if necessary, to negotiate modifications before adoption of a formal SCS is required in 2015. This two-phase approach (e.g. beta-SCS, final SCS) is believed to be Shasta County's best chance at eventually adopting a regionally supported SCS that exceeds Shasta County's placeholder target for GHG emission reductions assigned by the California Air Resources Board (CARB).

Whereas the Regional Blueprint effort remained conceptual in nature, implementation of the community's regional growth vision via the SCS process will be stepping in on more specific matters where intra-regional friction may already exist (or may lie close to the surface). For instance, this project will:

- Designate specific priority locations for development or protection;
- Develop a list of specific short-term action items that local agencies might employ to seed desired land use patterns and characteristics, and;
- Establish a single-point, internet accessible location for housing and publishing regionally merged GIS data and for showcasing individual agency and overall regional progress toward Shasta County's GHG emissions reduction target.

Specific tasks include the implementation of recent or soon to be completed technical feasibility studies as well as innovative new work tasks required to coordinate individual agency SCS implementation efforts under the umbrella of a shared regional plan. This proposal may be broken down into the following elements:

1. Complete development of a suite of GIS-based urban spatial analysis tools;
2. Develop exurban (rural/small town) growth management tools;
3. Develop 'Complete Streets Level of Service (LOS) & Non-Motorized Network Integration Study';
4. Implement an internet accessible 'Regional GIS/Climate Change Accountability Platform';
5. Develop an intelligent transportation systems (ITS) network planning and integration strategy for travel-related performance measures.

Integrated within Shasta County's approach is specific attention to the three E's of sustainable communities. Specific tools (described in more detail in Section II) will effectively insert environmental health, social equity, and the economy into regional plans and elevate the degree to which each factor might influence planning and decision making processes. Moreover, completion of the proposed work scope is directly aimed at the State's planning priorities, including the promotion of infill development in strategic and meaningful locations; the protection and enhancement of environmental, agricultural, and natural resource assets, and; a focus on land use patterns and characteristics that are not only resource and transportation efficient, but also aligned with documented community values and priorities.

I. PROPOSAL DESCRIPTION

PROJECT NARRATIVE/OVERVIEW:

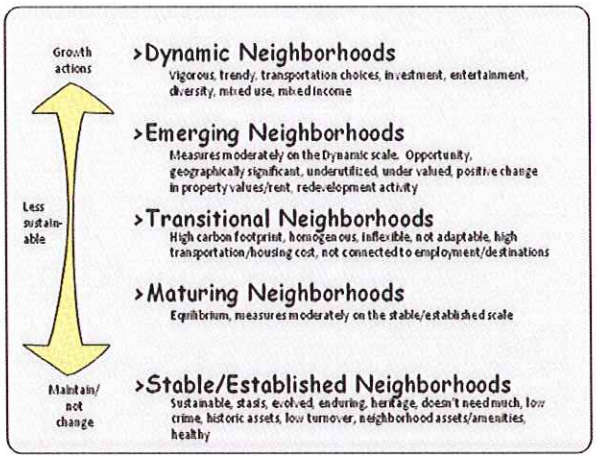
Six primary tasks comprise this proposal. ***Although presented as discrete tasks, the first five tasks should be considered elements of a single, unified approach and be viewed as an extension and outgrowth of the Regional Blueprint process findings and recommendations*.

TASK #1: Identify high-priority urban growth/redevelopment areas via development of GIS-based spatial analysis tools

The Shasta*FORWARD*>> Regional Blueprint was a conceptual level visioning process employed to build regional consensus around a set of generalized growth principles. Required for the implementation of this vision are objective tools for determining actual/specific locations to target for 'urban seeding' efforts – e.g. locations where minimally scaled albeit strategically placed public sector investment and policies are most likely to be reinforced by private sector, market driven investment and development over time.

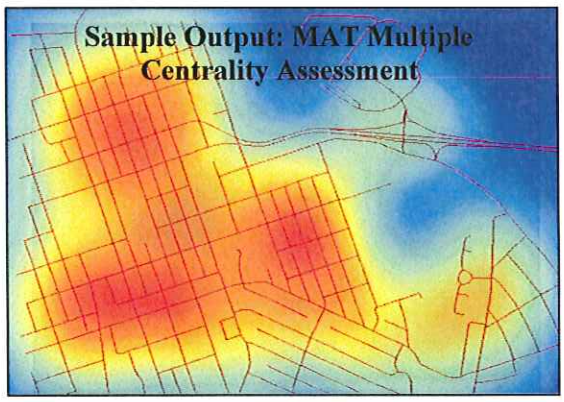
It is proposed that a three-part suite of GIS-based analysis/hotspotter tools be completed or developed. The results will be layered to arrive at a specific regional land use plan for Shasta County's SCS.

a) Develop 'Neighborhood Dynamic Scale' (NeDS)
Regions do not need to become uniformly complex. The 'Neighborhood Dynamic Scale' will assess the relative flow of people and investment in/out of the neighborhood and then encourage dichotomous efforts toward either 'dynamic' (e.g. actively growing, layered neighborhoods where change and activity are desired) or 'stable' (e.g. mature and established neighborhoods where fortification, maintenance, and protective activities are desired).



b) Complete 'Mobility Assessment Tool' (MAT)
Currently funded through the Regional Blueprint program, MAT calculates and layers multiple measures of 'centrality' in order to highlight the degree of mobility afforded by the existing land use–transportation environment. MAT outputs reveal where existing and potential opportunities exist for 'seeding' desirable land use patterns and characteristics – locations where strategic projects, investments, and policies might combine to effectively and efficiently achieve vehicle miles traveled (VMT) and corresponding GHG emission reductions.

A proof-of-concept based on a 1x1 mile urbanized area is near completion. Additional data is required to enhance consideration of non-motorized travel modes and to enlarge the study to include the greater urbanized area.



Consistent with the growth and development direction preferred by local residents, locations appropriate for urban core and corridors will be indentified. For example, local agencies may seek to organize a grouping of small nodes into a single

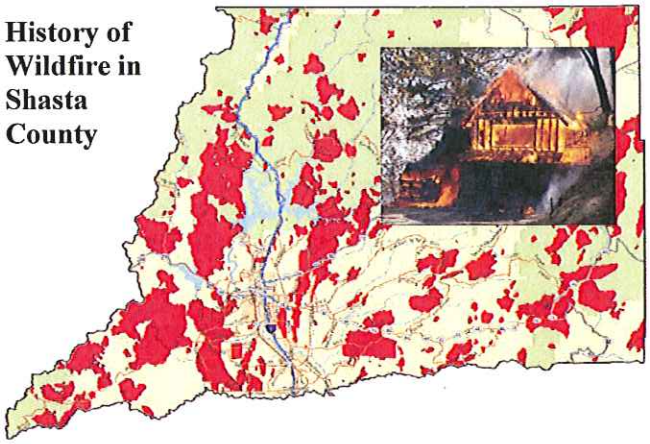
regional core. Alternatively, local agency actions may seek to develop urban corridors by encouraging growth and development between disparate nodes.

c) Develop 'Community Health Index' – This tool will examine the risk factors that lead to or are associated with increased vulnerability to exposures, diseases, and other adverse health outcomes related to regional land use patterns, transportation systems, and climate change impacts. A composite index of several community health indicators is proposed to assist with the geographic prioritization of growth and development as well as targeted efforts in support of healthy lifestyle choices among vulnerable/susceptible segments of the population.

   Component data sets comprising this index must have the ability to be tracked over time and have a neighborhood-level spatial component to be useful in the context of the SCS. In order to ascertain which data sets are most appropriate, Shasta County RTPA recently participated in the 'Integrating Community Health Measures into Modeling for Healthy Regional Planning and Decisions' workshop and will continue to work side-by-side with local public health officials.

TASK #2: Exurban (rural/small town) growth tool

While the above measures (Task #1) will be applied to urbanized locations, Shasta County's smaller towns and rural areas require an alternative approach. Extensive community outreach indicates a preference for more distinct and self-contained towns and communities than what currently exists outside of Shasta County's south-central urbanized corridor. Due to differences in community priorities and data availability in rural areas, a proxy tool based on wildfire risk and emergency response time is proposed. GHG emission reductions will be calculated and tracked, but as a co-benefit to the more salient and relevant issues of wildfire risk and the ability to respond to such emergencies.



While the underlying principles of smart growth are generally accepted in rural Shasta County, the overall concept is perceived to focus on exclusively urban issues. This task respects local rural values and priorities by using wildfire fuel loads, topography, emergency response time, and other such spatial data to yield a similar result – e.g. a more efficient development pattern that is consistent with the Regional Blueprint vision, documented community values and priorities, and the local capacity to provide public infrastructure, services, and transportation/mobility options.

TASK #3: Complete Streets LOS Study & Non-Motorized Network Integration

Viewed from the perspective of a pedestrian or bicyclist, mobility and level of service (LOS) is more fittingly defined by the quality, safety, and efficiency of the network than congestion levels. Shasta County recognizes that two, sometimes competing transportation networks exist – one for automobiles and one for non-motorized modes. This task examines these two networks, indentifies where conflict/overlap occurs, and then highlights and prioritizes locations where these physical and perceptual barriers might be resolved.

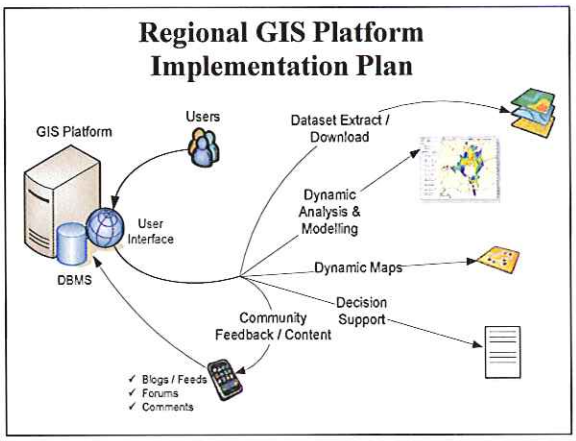
Deliverables include a complete, merged GIS data set of all pedestrian and bicycle related infrastructure in the region and a prioritized list of projects consistent with the regional land use vision.

TASK #4: Implement Regional GIS/Climate Change Accountability Platform

It is proposed that the findings and recommendations of the 'Shasta Regional GIS Platform Feasibility Study' be implemented. This study developed region-wide consensus on data standards for merging various disparate data formats into one; identified the optimal location, hardware, and software for hosting a Regional GIS Platform; and developed a prototype online web portal for publishing and exchanging GIS data and analysis. Specific work tasks proposed for further funding include development of a host contract, regional MOU, software licensing (hardware to be provided via local match or possibly federal grant), and some filling in of GIS data gaps.

The platform will make regional data and the SCS plan accessible via an online portal, including the ability to visually/geographically track individual GHG emission reduction efforts and demonstrate local agency and cumulative regional progress toward (and eventual compliance with) Shasta's GHG emission reduction target.

In addition to implementing the GIS platform, several core regional data sets must be completed for the calculation of regional performance measures. Funding for the majority of outstanding data needs has been awarded to Shasta County via Prop 84 Modeling Incentive grant funds. Some additional funding is needed to generate and/or aggregate remaining core regional GIS data needs. The availability of various regional data sets and the querying capacity provided by the GIS Platform will assist in decision-making analysis, including the evaluation of regional, sub-area, and project specific proposals and/or scenarios.



It should be noted that there are substantial co-benefits and leveraging of monetary and in-kind contributions associated with the GIS Platform. This task will solidify a public/private/educational sector partnership that has been in the planning stages for much of this year. Shasta County RTPA has partnered with Shasta College to serve as the physical host location of the GIS platform server and to develop a GIS intern program where students may work side-by-side with private sector GIS professionals under management by the Shasta County RTPA. Based in part on the promise of this project, Shasta College was successful at acquiring a grant from the National Science Foundation (NSF) in the amount of $188,000 to establish a program of student interns and to pay student intern wages for data and server maintenance activities.

GIS services are already an important niche industry for Shasta County. The result of this effort will support green job development in an economically depressed region that currently lacks a local four-year public university.

It should also be noted that this project has been developed from the beginning with an eye toward expansion – including geographic area (e.g. neighboring counties, the Sacramento Valley, and the North State Super Region) and an open architecture with infinite possible applications.

TASK #5: Intelligent Transportation Systems (ITS) Planning & Integration Study

A comprehensive ITS Planning & Integration Study is proposed to collect continuous real-time traffic data via a network of regional data collection devices. In addition to providing ongoing traffic count data in support of long range planning, congestion monitoring, project prioritization, and economic development activities, the data will be linked and fed into the Shasta's GIS platform for up-to-date dissemination via online portal.

Real-time data collection will also improve the ability to calibrate Shasta County's travel demand model and improve air quality modeling capabilities. This project is undertaken in partnership with Caltrans and is reflected in the 2025 California Transportation Plan priorities.

The scope of this task is limited to planning – including a feasibility study, phased implementation plan, funding assessment/outlook, and a strategy for integration with the GIS platform integration, SCS/RTP, and performance measures.

TASK #6: Rural Technical Assistance
Based on the results of the Shasta*FORWARD*>> Regional Blueprint, a number of rural counties have approached Shasta for technical support. In addition to support provided to individual agencies, Shasta County RTPA has presented at several Rural Blueprint Learning Network workshops and in Great Valley Center conferences in the Sacramento and San Joaquin Valley. This task would provide support funds for the Shasta County RTPA to continue to provide technical assistance and the application of tools and methods described herein.

II. PROPOSAL DESCRIPTION

STEP 1: THRESHOLD REQUIREMENTS

1. Consistency with the State's Planning Priorities:

Promotes infill development and investment in existing communities – Among the shared community priorities identified through Shasta County's Regional Blueprint effort is a focus on existing community assets. Before expanding the urban environment into rural, agricultural, or open space areas, residents strongly favor redevelopment, modernization, and the filling-in of vacant, dilapidated, and/or underutilized lands within existing neighborhoods and communities.

An approach and accompanying methodology is required that builds upon existing development patterns and present-day political realities with outputs that local and regional decision makers can take immediate action upon.

GIS-based spatial analysis tools outlined in Task #1 will be utilized to determine where redevelopment, infill, and increased development intensity are most appropriate – locations where the 'D' factors combine to create meaningful density and where 'urban seeding' efforts may be focused to attract public use and private sector investment over time.

Protects and enhances environmental and agricultural lands, and natural and recreational resources – Land use/features data previously acquired and/or assembled via the Regional Blueprint process will, via the GIS platform, be made compatible with various other spatial and attribute data in order to better understand the inter-relationships and impacts associated with the conversion of land to urban uses.

Areas that are currently used or otherwise designated for agricultural production, grazing, natural resources extraction, open space, water management, and recreation/tourism will be identified and incorporated into the SCS planning process and subsequent prioritization of resource allocation.

Shasta County also has many rural areas compatible with small-scale agricultural production and rural industries. Small farms are key to Shasta County's industrial mix and rural lifestyle. One of the proposed spatial analysis tools – the 'Neighborhood Dynamic Scale' – is unique in that it not only highlights areas to focus growth and development, but also those areas where maintenance and stability enhancing actions are more appropriate. Outputs will be utilized to guide the preservation and protection of those rural assets and spaces having a working/functional capacity.

Encourages location and resource efficient development – Development of the GIS-based 'Mobility Assessment Tool' (MAT) will soon be completed. This tool, based on a synthesis of various mobility calculations, highlights those areas in the existing urban fabric where growth and development actions are best focused. In other words, where VMT reductions are most easily achieved (how attractive and meaningful alternative travel options are) and where community assets already exist (i.e. where infrastructure capacity already exists).

The Regional Blueprint program funded development of MAT and its application to a 1x1 mile proof-of-concept area. It is proposed that this tool be applied to Shasta County's south-central urbanized region along Interstate 5. The results will be used to develop a more transportation-efficient SCS plan.

Over and above mobility concerns, Shasta County must also take into account the provision of water and community services. Some locations in Shasta County are known for poor water quality and inconsistent availability due to geologic conditions. These areas have been developed in the past and are open to new growth in current general plan and zoning documents. Similarly, development has occurred or is projected to occur in areas with high risk of wildfire. Providing public services to such areas is cost and energy prohibitive.

Such considerations will be more fully addressed under the proposed scope of work by merging relevant GIS data sets within the GIS platform, thereby allowing cross-analysis among various data sets and improved integration with local and regional planning and decision-making.

2. Reduction of GHG emissions and consistency with other regional plans:

The Shasta Regional GIS/Climate Change Accountability Platform will provide an accessible location to account for, track over time, and report the variety of cumulative GHG emission reduction efforts that will be required to demonstrate progress toward Shasta County's regional GHG emission reduction target. This approach is particularly important in smaller regions such as Shasta County where short-term, high impact tools/strategies for reducing GHG emissions (congestion pricing, HOV lanes, etc) are limited. In order to demonstrate progress and compliance in smaller MPO regions, the many small but cumulative actions taken by local agencies and non-public sectors must be documented and measured collectively.

Each local agency project and policy change within designated priority growth areas that are consistent with the regional SCS plan will have an appropriate metric for determining the one-time or ongoing GHG emissions reductions. The Shasta County travel demand model and EMissions FACtors (EMFAC) post-processing will be used to measure the benefit of projects and policies compared to the current trend forecast of mobile source emissions. Additional metrics and best management practices (BMPs) will be incorporated into the GIS platform to measure non-mobile sources for AB 32 compliance.

Emission reduction efforts will be tracked by geographic location, jurisdiction, and responsible party, thereby highlighting the overall approach, what specific strategies are most effective, and where opportunities exist for additional attention.

In the longer term, the proposed ITS Planning & Integration Study lays the groundwork and develops a plan for phasing in a comprehensive ITS network. This network of ITS stations will feed traffic data into the GIS platform. Data will be used to determine the actual VMT/GHG reductions attributable to specific strategies/projects compared to current trend projections and modeled outputs.

This proposal addresses all outstanding elements of Shasta County's SCS planning strategy for GHG emission reductions. The SCS will in turn be incorporated and internally consistent with the 2015 RTP update. This project is also consistent with and specifically supports the objectives found in the Shasta

County Bikeway Plan, California Transportation Plan, State Implementation Plan, State Transportation Improvement Plan, local general plans, and the regional Air Quality Attainment Plan.

3. Meets the Collaboration Requirements of the selected focus area:

Central to the success of this proposal is a joint understanding of the work scope from those agencies/entities involved and intent to actively participate in the process. Provided by attachment are letters from the following entities: Shasta County IT Department, City of Anderson, City of Redding, City of Shasta Lake, Shasta County Public Health, Healthy Shasta, Shasta College, ENPLAN, VESTRA Resources, Caltrans District 2, Far North Regional GIS Council, Tehama County, and the Great Valley Center.

All local agencies will be providing technical guidance and uploading GIS data sets to populate the Regional GIS Platform. Planning and GIS/IT staff from each agency will also be reality-checking the outputs from analytical tools described in Task #1 and then help to translate the results into policy recommendations needed for SCS development and local agency buy-in.

The Shasta County Public Health Department will partner with the Shasta County RTPA in development of the Community Health Index, including identification and acquisition of appropriate indicator data. Public Health community outreach staff will continue to provide assistance with public engagement activities, particularly amongst minority, non-English speaking, and otherwise disadvantaged communities.

The Far North Regional GIS Council will facilitate communications and interaction with state and federal agencies having a planning purview in Shasta County as well as private sector entities providing GIS related services.

Shasta College will provide a physical location for the regional GIS server and develop a student intern program for maintenance and upkeep of the regional data and server technology. Shasta College will utilize a recent grant from the National Science Foundation to develop the student intern program and to pay student intern wages.

STEP 2: PROGRAM OBJECTIVES

1. Improve Air and Water Quality:

Shasta County's primary strategy for reducing mobile-source pollutants is a change to more transportation-efficient land use patterns designed to reduce per capita vehicle miles traveled (VMT). This will be addressed via the Mobility Assessment Tool (Task #1b) and measured via the Shasta County Travel Demand Model.

All air pollutants calculated via Emissions Factors (EMFAC) post-processing will be measured and utilized as performance measures, including CO2, PM10/2.5, ozone, and CO. Monitoring actual air pollutant levels will reveal whether activities designed to reduce GHG emissions are working to improve air quality. Performance measurements will be disseminated through the Regional GIS Platform for online access.

Responsibilities and data associated with water quality in Shasta County are scattered and not easily accessible or usable for regional planning purposes. Under the proposed scope of work, water-related data will be compiled and incorporated into the GIS platform to assist with and influence decision making processes. As in other program objective areas, the ability to perform joint analysis and comparison between various disparate data sets is key to more effective decision making.

Considerations may include recharge area mapping, water consumption (including use type – i.e. household, agricultural, and industrial), point source and non-point source water quality monitoring,

ground water levels, and so forth. Results from this analysis will help Shasta County avoid the impact of development and transportation systems on water sources as well as reduce public exposure to contaminated sources. Performance will be measured by the number of impaired water segments.

Shasta County is part of the Sacramento Valley Integrated Regional Water Management Plan – a nested plan of elements ranging from local to basinwide. Applicable portions of the IRWMP will, as a result of this proposal, be nested within the larger context of land use, transportation, and the environment. Water management will, as a result, assume a more prominent role in regional planning and growth and development related decision making.

2. Promote Public Health:

This proposal will generate a community health index; a composite measure of public health indicators where spatial data is available at the neighborhood scale and where future data may be readily acquired for tracking and monitoring performance over time and as a function of SCS implementation activities.

Indicators being considered for the Community Health index include: walkability (access to basic goods, transit, etc), access to healthy foods (grocery, farmers market, etc), presence of community resources (parks, libraries, etc), exposure to toxins and other health threats, and so forth. These and other indicators will, as a result of this proposal, be indentified in partnership with Shasta County Public Health.

3. Promote Equity:

To assure equitable benefit and impacts associated with growth and development policies and actions, an improved understanding of the spatial distribution of low-income and minority/underserved populations compared to community services, public investments, and planned actions is needed. Performance measures might include an analysis of jobs/housing balance, access to transportation options, and demographically representative public outreach results, but could be measured in any manner where spatial social data exists.

The SCS process will have an appropriate public outreach process, but will not repeat over three years of public engagement efforts documented in detail via the recently published Shasta*FORWARD*>> Regional Blueprint Final Report. Extensive community engagement was performed during the Regional Blueprint process to ensure that the community vision accurately portrayed a broad and representative cross section of residents, including those segments of the population that are often disconnected from traditional planning and public outreach practices. The results from the Regional Blueprint process will continue to serve as the foundation of all actions moving forward toward an SCS plan.

4. Increase Housing Affordability:

As an island MPO surrounded by rural counties, Shasta County is unique among metropolitan regions. The scale and complexity of housing affordability issues is not comparable to larger regions with multiple urban cores. As the Shasta region grows in size and population, however, special attention must be paid to ensure a positive balance between housing stock and employment centers; places where residents may work and live in the same community.

The merging and compilation of housing and employment GIS data with various other spatial and attribute data sets via the Regional GIS Platform will allow for analysis and integration into the SCS planning process. Improvements in Shasta County's travel demand model (via the Proposition 84 Modeling Incentives Program) will likewise increase the ability to measure local and regional impacts of planned or proposed development/projects and facilitate the evaluation of alternatives.

The Transportation and Housing affordability index will be utilized and incorporated into the GIS platform to help evaluate alternative regional growth patterns and transportation investments. This tool may also be used to measure and track trends over time in response to SCS implementation efforts.

Regarding consistency with the Regional Housing Needs Assessment (RHNA), Shasta County RTPA is not a council of governments and therefore has no explicit purview over the RHNA process. Instead, the RHNA is administered by the State Department of Housing & Community Development (HCD) in conjunction with Shasta County and the three incorporated cities. Shasta County RTPA will, however, work closely with local agencies and HCD to integrate the RHNA process with the SCS process.

5. Promote Infill and Compact Development:

GIS-based spatial analysis tools outlined in Task #1 will be utilized to determine where redevelopment, infill, and increased development intensity are most appropriate – locations where the 'D' factors combine to create meaningful density and where 'urban seeding' efforts may be focused to attract public use and private sector investment over time.

Results will be tracked and measured via the Regional GIS Platform. Each individual infill and compact development project will be identified and geo-tagged in order to track GHG emission reductions. Results will be measured against Shasta County's current trend land use and travel demand modeling outputs.

6. Revitalize Urban and Community Centers:

Where urban and community centers are appropriately located (i.e. good transportation accessibility/transportation efficient), such locations will become focus points for a variety of potential urban seeding efforts and policies. This approach – whereby numerous, minimally-scaled individual public agency efforts are focused on designated priority locations within the urban fabric – will revitalize urban and community centers by encouraging, partnering, and leveraging private sector investment and development that might otherwise occur haphazardly.

Building permits and assessed value of structures within designated growth and development focus areas and that are consistent with the SCS may be measured to gauge success.

7. Protect Natural Resources and Agricultural Lands:

Natural resources and land-based industries have long been key components of Shasta County economic well-being. A sustainable approach to growth and development that respects and preserves these key assets is needed.

Shasta County's prime agricultural lands share the same location (valley floor along I-5 and the Sacramento River) and features (flat, accessible, rural aesthetic) that make it attractive for conversion to urban and low-density development. Resource lands mapped during the Regional Blueprint process will be utilized during SCS development. Acres of land impacted (current trend versus SCS) will be tracked to measure success.

Timber management is likewise a high-priority concern made more so by the devastating 2008 fire season. Areas prone to wildfire will be mapped and integrated on the GIS Platform. In Shasta County's smaller communities and mountainous areas, wildfire risk (fuel load, slope, etc) and emergency response time will be used as a proxy for the more detailed and data-intensive methodologies being applied in the region's urbanized core.

Other plans, including the California Wildfire Action Plan, Natural Community Conservation Plan, Surface Mining and Reclamation Act, and Williamson Act properties will be consulted and respective GIS data incorporated into the SCS planning process.

8. Reduce Automobile Usage and Fuel Consumption:

In the current 20-year planning horizon, more transportation efficient land use patterns will be Shasta County's primary tool for affecting mode choices other than the single occupancy vehicle. For this purpose, the 'D' factors[1] have been extensively researched and correlated to travel behavior. Where the 'D' factors help communities understand what strategies, when combined, will reduce trip length and increase mode choice, it does not necessarily help a community or region understand where such activities will be most effective and doable within the physical and political environment.

The 'Mobility Assessment Tool' and consultation with local agencies will be utilized to guide and prioritize where the 'D' factors can and should be implemented. Reduction in per capita VMT, fuel use, and vehicles per household are likely to be used to quantify the outcome.

This proposal clearly and directly addresses all of the goals outlined in the California Transportation Plan (CTP). In the interest of limited space, they are not repeated here.

9. Improve Infrastructure Systems:

A key benefit of this project will be the improved utilization of existing underutilized infrastructure as well as the delay (or possibly elimination) of new or expansion infrastructure.

Utilizing existing funding via the Regional Blueprint program, the impacts of additional growth will be tested by 'loading' additional intensity/density at key locations to ascertain the level of additional improvements that will be required to accommodate alternative development patterns and intensities. This will involve development of a number of growth scenarios at each location in order to establish a range of improvements for consideration.

The end result is essentially a cost/benefit measurement based on a range of intensity/density scenarios within the sub-area planning zone. The analysis will be utilized to provide realistic goals within priority growth areas for development intensity.

10. Promote Water Conservation:

Whereas many urban areas are visibly disconnected from their water source, Shasta Lake and the surrounding mountain tops serve as a constant reminder of where water comes from and the current supply (or lack thereof). In 2009, for example, Shasta Lake fell to a decades-low mark, a remarkable 159 feet below capacity. Snowpack levels in 2008/09 were similarly lacking.

Both residential and agricultural water use performance measures were calculated during the Regional Blueprint process. These figures will help inform the SCS planning process. Through the Regional GIS Platform and integration with the SCS process, relevant water resource data and priorities will receive appropriate consideration.

11. Promote Energy Efficiency and Conservation:

All proposed SCS seeding projects will be required to address and meet minimum standards for energy efficiency and conservation. In addition to catalyzing more transportation and infrastructure efficient land use patterns, these projects will set an example for energy efficient best practices.

The results of such efforts may be measured in percent deviation from a base year and/or current trend. Results will be included as a data layer on the Regional GIS Platform.

[1] In travel research, urban development patterns have come to be characterized by 'D' variables, including Density, Diversity, Design, Destination accessibility, and Distance to transit.

12. Strengthen the Economy:
One of the co-benefits targeted by the proposed scope of work is the continued development of a public-private-educational sector partnership designed to incubate green-sector jobs in the GIS industry. Already a niche industry in Shasta County, the proposed project will provide Shasta College GIS students the opportunity for interns to work side-by-side with experienced industry professional under contract with the Shasta County RTPA for maintenance and upkeep of the regional data and the server platform. Interns will be paid through a $188,000 National Science Foundation grant awarded to Shasta College for this purpose. Success will be measured by the number of GIS student interns participating in the program.

Interstate 5 is Shasta County's economic lifeline for access to larger markets and local movement of goods and services. The proposal will reduce non-essential local travel demand on the Interstate 5 Corridor. Travel demand modeling outputs will be translated into hours of lost productivity due to traffic delay and other performance measures.

STEP 3: PRIORITY CONSIDERATIONS

1. Collaboration with state, regional, local, and private stakeholders and community involvement:
Project partners: Local agencies and private and educational sector partners have been organized to carry out this proposal. The Shasta County RTPA will act as lead agency ultimately responsible for all tasks and deliverables.

Local agencies will provide the most current local data sets for integration into the Regional Platform and provide updates as needed. Local agency planning and IT/GIS staff will continue to serve in a technical advisory capacity during implementation of the Regional GIS Platform and SCS development. Various other agencies (including the Department of Fish and Game, Cal Fire, Bureau of Land Management, Department of Water Resources) will contribute pertinent GIS data and expertise relevant to the SCS planning process. The Far North Regional GIS Council will serve as an inter-agency bridge, assisting with communications and providing technical input.

Vestra Resources, a Redding-based consultant, will provide support and technical expertise in data acquisition and creation of the GIS Platform. VESTRA will also develop the Neighborhood Dynamic Scale (NeDS), Mobility Assessment Tool (MAT), and Community Health Index. A qualified local GIS consultant will assist with generating additional GIS data as identified for performance measure calculations and other analysis.

Shasta Community College will be a partner in providing data migration and maintenance via the GIS student intern program. The National Science Foundation will contribute grant funding to set up the program and to pay student intern wages.

The Public Health Department will assist in development of the Community Health Index, provide GIS data, and assist with community outreach efforts.

Caltrans District 2 will provide GIS data, technical support, and coordination between districts, particularly in performance of the ITS Planning & Integration Study.

Community outreach: The SCS process will have a substantial public outreach component, but will not repeat the three plus years of public engagement efforts documented in detail via the recently published Shasta*FORWARD*>> Final Report. The results from the Regional Blueprint process will continue to serve as the foundation of all actions moving forward toward an SCS plan.

2. Proposal demonstrates strategies or outcomes that can serve as best practices (BPS) for communities across the state.

All methods and tools developed through this proposal are transferrable and will be made available to other agencies. Methods and tools will be usable by other small urban and rural regions who share similar resource, GIS data, and staffing limitations needed to undertake a regional blueprint and/or SCS planning effort. Because Shasta County is an island MPO surrounded by rural counties, this approach has been intentional and necessary to allow for multi-regional coordination with neighboring counties, the Sacramento Valley, and/or the sixteen-county North State Super Region.

For example, North State agencies will be invited to piggy-back on the Regional GIS Platform. Shasta County RTPA is also scheduled to present the status of current and planned methods and tools at the Rural Counties Regional Blueprint workshop. Shasta County will continue to provide technical assistance to other regions who are interested in using any of the methods and tools developed via the Regional Blueprint and SCS processes. Task #6 would provide support funds for the Shasta County RTPA to continue to provide technical assistance and the application of tools and methods described herein.

3. Proposal is leveraged with additional resources, in-kind or funds.

This proposal is an extension of efforts funded via the Regional Blueprint program ($715,000) and the Proposition 84 Modeling Enhancements grant program ($400,000).

This proposal also brings to the table several new sources. A grant from the National Science Foundation ($188,000) will help fund the Regional GIS Platform. In-kind contributions will continue to be provided by local partner agencies for technical assistance/advisory and providing GIS data.

Future funding sources are anticipated, whether through SB 1445 or other similar effort by the State to provide ongoing funding for planning and implementation efforts.

4. Proposal addresses Climate Change Impacts.

Although Shasta County's contribution to global climate change is statistically insignificant, the need for joint cooperation toward reduced GHG emission is critical to Shasta County's well being. Whereas many urban areas are visibly disconnected from the impacts of climate change, the surrounding lakes, mountains, and forests serve as a constant reminder in Shasta County. In 2009, Shasta Lake fell to decades-low mark; 158 feet below its high mark. Snowpack levels on surrounding mountain peaks were 20% below average in 2009. In 2008 Shasta County suffered from extensive wildfires exacerbated by drought conditions. Approximately 86,500 acres of Shasta County forests were incinerated in a single fire season.

Shasta County will, over the next four years, strive to reduce per capita mobile source GHG emissions by 8% compared to the current trend data. In other words, Shasta County must strive for no change compared to the 2005 base year. This target, provided to Shasta County by CARB, is meant to serve as a placeholder target to allow time for Shasta County to develop an SCS. Upon completion of the SCS, Shasta County will have a specific plan and supporting data to determine if this 'reduction' level is appropriate, or if a more ambitious target is feasible.

5. Proposal serves an economically disadvantaged community.

Shasta County's median household income is 69.4% of the statewide average, considerably below the 80% threshold for economically disadvantaged communities (EDC).

A diverse cross-section of Shasta County residents helped develop the foundation of this project – the Shasta*FORWARD*>> Regional Blueprint. Demographic information, including household income, was

gathered during all surveying. Specific strategies utilized to ensure the inclusion of disadvantaged communities include a partnership with Shasta County Public Health. Public Health community outreach specialists utilized their existing relationships within the community to organize focus groups, interviews, and surveys among low income and otherwise disadvantaged populations. This partnership will continue, including the translation and delivery of public notices and surveys to non-English speaking residents.

PROPOSAL DESCRIPTION -
STEP 4: ORGANIZATIONAL CAPACITY

Organizational experience completing this type of proposal or similar proposals:
In evaluating this proposal, the SCRTPA's demonstrated commitment and track record of producing high quality deliverables, facilitation of interagency coordination, inter-agency technical support, and the development of innovative approaches and methodologies transferable to other small urban and rural regions should be considered.

Active partners that will help develop the proposal:
This proposal will rely upon contributions from all local agencies; in particular, development of a jointly accepted SCS will rely on local agency planning and GIS staff to push the project up from within their own respective organization. A commitment from project partners is demonstrated by the attached letters of support/participation and Work Plan worksheet.

How the proposal will be kept on schedule and within budget:
Shasta County RTPA proposes to employ the Program Evaluation & Review Technique (PERT) – including specific project control strategies to ensure the project remains on-schedule and achieves promised objectives/deliverables. Project management for critical tasks may include schedule compression (i.e. start a subsequent task before completion of a prerequisite task); reassignment of resources (i.e. moving staff assigned to non-critical tasks to critical tasks); and increased resources (i.e. reallocating staff assigned to other projects for a short duration).

Another key strategy is a commitment to producing and delivering timely and sufficiently detailed progress reports, including the percentage of budget expended versus the percentage of work scope completed. A narrative description of accomplishments and obstacles – where additional technical support may be needed – will also be provided.

Ultimately, it is Shasta County RTPA's and the project manager's history of demonstrated capabilities to handle lengthy and complex planning efforts and to provide high-caliber deliverables. The Shasta*FORWARD*>> Regional Blueprint Final is a prime example.

Contingency plan for budget overrun:
In the unlikely event the proposed project goes over budget, local Planning, Programming, and Monitoring (PPM) funds will supplant Prop 84 grant funds.